

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 3-8 and 12-23 are presently pending in this application, Claims 9-11 having been canceled, Claims 1-8 and 12-17 having been amended and Claims 18-23 having been newly added by the present amendment.

In the outstanding Office Action, Claims 10-17 were objected to for being in improper form; Claims 1, 2, 4 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by Ishii et al. (U.S. Patent 4,875,519); and Claims 3 and 6-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ishii et al.

Claims 1, 3-8 and 12-17 have been amended and Claims 18-23 have been added herein. These amendments and additions in the claims are believed to find support in the specification, claims and drawings as originally filed. In response to the objection to the claims, Claims 10-17 have been amended to remove the noted multiple dependencies and the pending claims have been amended to clarify the subject matter recited therein. Thus, these claims are believed to be in compliance with the requirements of the rule and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Briefly recapitulating, Claim 1 of the present invention is directed to a method of manufacturing an aluminum extruded raw pipe and recites “extruding a solid aluminum billet having a solidified shell layer formed at an external peripheral surface thereof, the solidified shell layer having the maximum thickness of 13 mm or less.” By extruding a solid billet as such, the extrusion pressure on an external peripheral side is well balanced with that on an

inside of the billet, thereby achieving an extruded raw pipe with a smaller surface roughness and excellent surface accuracy.

Ishii et al. is directed to a method of manufacturing a *hollow* billet, and does not teach or suggest “extruding *a solid aluminum billet* having a solidified shell layer formed at an external peripheral surface thereof, the solidified shell layer having the maximum thickness of 13 mm or less” as recited in Claim 1 (emphasis added in italic). More specifically, Ishii et al. describes a method of manufacturing *a hollow billet* for manufacturing an aluminum pipe, *not a solid billet* to obtain an aluminum extruded raw pipe as seen from Figures 1 and 2 of the specification. Furthermore, according to Ishii et al., the Ishii et al. approach “provides a reliable method for the manufacture of high-quality hollow billets which are free from internal defects”¹ and the solidified shell layer is formed on both the external surface and the internal surface of the hollow billet, rather than only on the external surface of a solid billet. It is respectfully submitted that since the hollow billet has a solidified shell layer on the external surface and the internal surface, the extrusion pressure on the external side would not be balanced with that on the internal side of the hollow billet. As such, if an aluminum hollow billet is extruded to obtain a hollow work, such as an extruded raw pipe, the surface roughness of the extruded raw pipe becomes larger and its surface accuracy is made poor. Ishii et al. is also silent on the use of a solid billet, instead of a hollow billet. Therefore, the subject matter recited in Claim 1 is clearly distinguishable from Ishii et al. Furthermore, because Ishii et al. fails to disclose the extruding as recited in Claim 1, the subject matter recited in Claim 1 is not rendered obvious over Ishii et al..

Likewise, Claims 20 and 22 include subject matter substantially similar to what is recited in Claim 1 to the extent discussed above. Thus, Claims 20 and 22 are also believed to be distinguishable from Ishii et al..

¹ Ishii et al., abstract.

For the foregoing reasons, Claims 1, 20 and 22 are believed to be allowable.

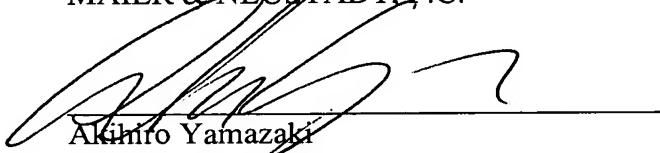
Furthermore, since Claims 2-8, 12-19, 21 and 23 depend directly or indirectly from Claim 1, substantially the same arguments set forth above also apply to these dependent claims.

Hence, Claims 2-8, 12-19, 21 and 23 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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